



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
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ASAP

D5489-041
Job Sheet 182079



Part No: D5489-041

Job Qty: 4 ea

Part Name: Wearplate Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/17/18

Job Tracking No:

Due Date: 8/20/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: D5489 REV.B IPP REV:A 17.11.03 AS PER DWG REV.A DD VERF:JFS IPP REV:B 18.05.06 PRELIM B7 DD VERF:JFS IPP REV:C 18.08.15 AS PER DWG REV.B DD VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	8/20/18	8/20/18	0.00	0.00	Start Up Waterjet		
100	Waterjet	4 pcs	8/20/18	8/20/18	0.00	2.59	Waterjet1		
110	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC2 Waterjet-4		
120	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC8-6		
130	Brake NC	4 pcs	8/20/18	8/20/18	0.00	2.52	Brake NC 1		
140	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC5		
150	Autoweld 1	4 pcs	8/20/18	8/20/18	0.00	1.22	Automated welding		
160	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC10		
170	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC5		
180	HandFinish	4 pcs	8/20/18	8/20/18	0.00	1.33	HandFinish4		
190	QC	4 pcs	8/20/18	8/20/18	0.00	0.00	QC3		
200	Packaging	4 pcs	8/20/18	8/20/18	0.00	0.00	Packaging3-2		
210	QC21-SA	4 Ea	8/20/18	8/20/18	0.00	0.00	QC21		

Part Op 100 - 1-Cut as per Dwg (D5489-1) Dwg Rev: B Prog Rev: B 2-Debur if necessary
Descriptions: 150 - ***SEE NOTE 8,10 FOR SURFACE BUILDUP*** 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: M/38701
180 - COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER DWG AND PER QSI005 A/R ROCKGUARD BATCH: 138886
200 - LOCATION : FP002

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304S16GA	304/316 Sheet .063	8.7200 sf (2.18 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M304S16GA	9	65	0

Part Specifications

Specifications could not be found.



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS			
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	

Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval _____
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Description Work Order Deviation	Disposition	
 Container No: S106188 Part: D5489 - 041 Job No: 182079 Serial No/Batch: S106188 Revision: B Inspector: _____ Exp Date: _____ Instructions: Various STC's Date: 08/28/18  By _____ Supervisor ification _____ inator _____ ong sions erance ig removed Drawing Finish Misread Turning Sequence		

Root Cause			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	
Design ☐	Operator ☐	Bending ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/V ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	
Past Expiry Date ☐	Manufacturing Process ☐		
Misidentified ☐	Past Due ☐	OTHER : _____	

DART AEROSPACE LTD		Work Order:	18207R
Description: <i>Uranplate</i>		Part Number:	D5489-1
Inspection Dwg: D5489	Rev: B	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
41.49	± 0.030	41.49	1		V8-01	
37.96	± 0.030	37.96	1		Tape	
21.70	± 0.030	21.70	1			
16.75	± 0.030	16.754	1			
12.00	± 0.030	12.003	1			
10.00	± 0.030	10.005	1			
5.30	± 0.030	5.306	1			
3.50	± 0.030	3.507	1			
2.44	± 0.030	2.448	1			
1.70	± 0.030	1.707	1			
2.31	± 0.030	2.314	1			
7.61	± 0.030	7.61	1			
5.92	± 0.030	5.922	1			
2.8	± 0.100	2.8	1			
6.74	± 0.030	6.742	1			
7.77	± 0.030	7.771	1			
8.35	± 0.030	8.35	1			
00.188	$\pm 0.005-0.001$	00.190	1			
3.8	± 0.100	3.8	1			
2.1	± 0.100	2.1	1			
0.78	± 0.030	0.788	1			
0.460	± 0.010	0.465	1			
0.620	± 0.010	0.622	1			
0.063	± 0.010	0.068	1			
0.400	± 0.010	0.404	1			
0.500	± 0.010	0.506	1			
0.300	± 0.010	0.307	1			
0.300	± 0.010	0.301	1			
2.6	± 0.100	2.6	1		AS	

Measured by: <i>31</i>	Checked by: <i>38</i>	QC Inspector:
Date: <i>18/08/08</i>	Date: <i>AUG 29 2018</i>	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

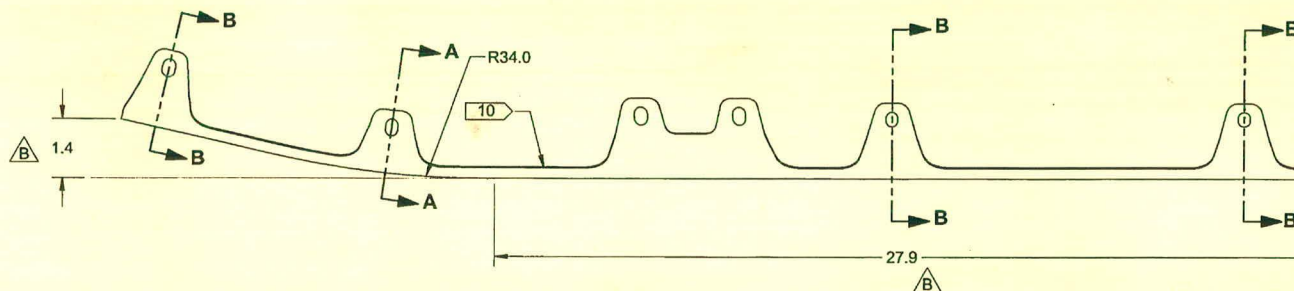
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

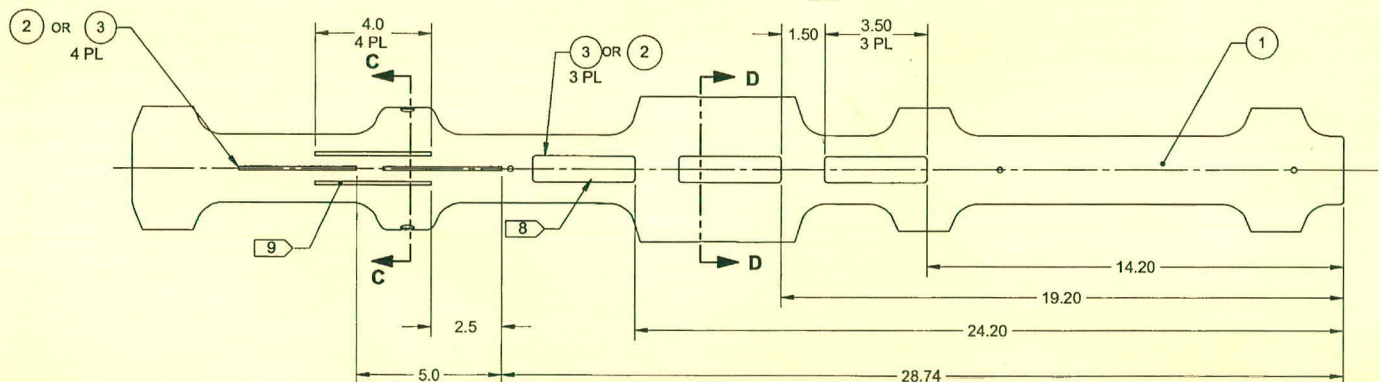
Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

ITEM	QTY -041	P/N	DESCRIPTION
	X	D5489-041	WEARPLATE ASSEMBLY
1	1	D5489-1	WEARPLATE
2	A/R	8259	HARDCOAT SURFACING AUTOMATED WELDING
3	A/R	2059B	HARDCOAT SURFACING MANUAL WELDING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 182075 MWS
18-08-17



D5489-1 WEARPLATE
(MAKE FROM D5489-1F)



D5489-041 WEARPLATE ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: PER DART QSI 044 6.1
- 7) WEIGHT: 2.9 lbs
- 8) WELDING: BUILD UP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR BUILD UP HARD SURFACING 0.17 TO 0.20 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) WELDING: BUILD UP HARD SURFACING 0.06 TO 0.13 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR BUILD UP HARD SURFACING 0.06 TO 0.13 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK, PER DART QSI 005 4.9

RELEASED
2018 AUG 16
ECN 18-736

B	ADDED NEW TABS ON -041/-045 TO ADD STRENGTH TO THE SADDLE AREA AND INCREASE RAD TO 0.8 FROM 0.38 TO -041/-3/-045. REASON NCR17-6673	SAD	18.06.14
A	NEW ISSUE	SAD	17.08.10
REV.	DESCRIPTION	BY	DATE
DESIGN	SAD	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SAD		
CHECKED	NO	DRAWING NO.	REV. B
MFG. APPR.	JFS	D5489	SHEET 1 OF 7
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	18.06.14	COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

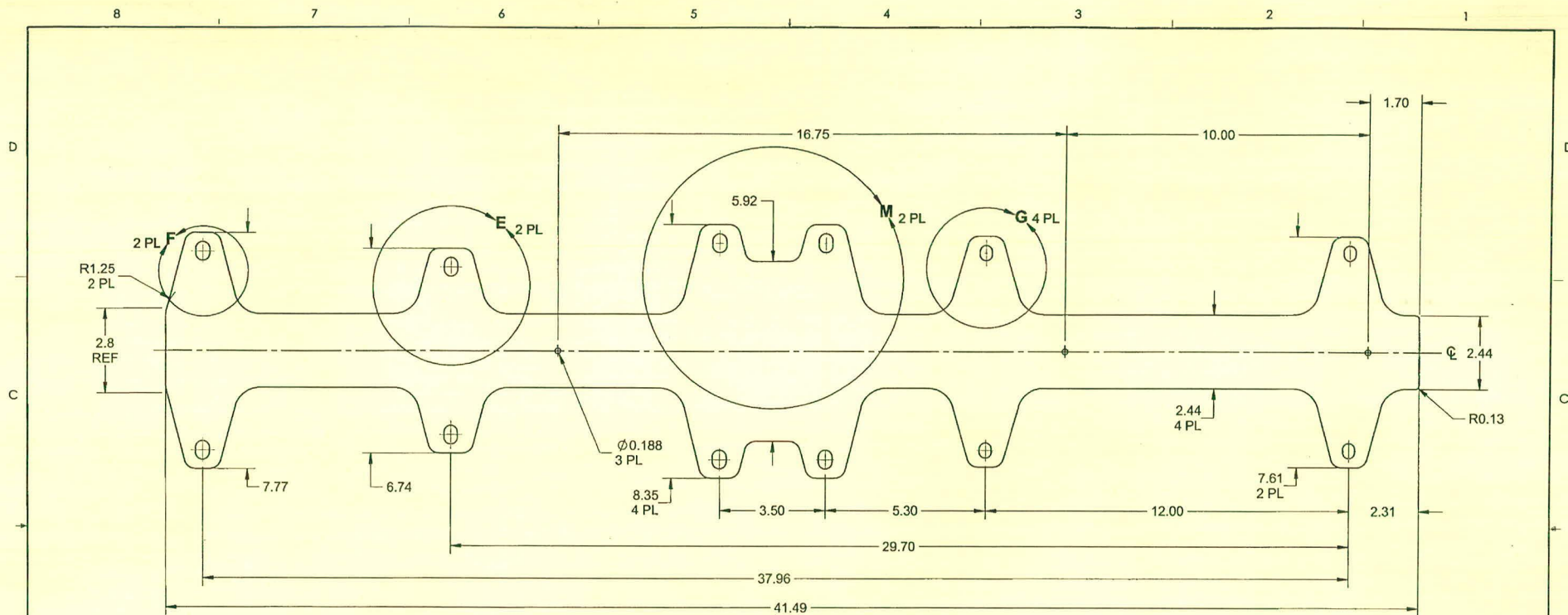


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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D5489-1F WEARPLATE
(FLAT PATTERN)



RELEASE

2018 AUG 16

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 16 GAUGE (0.063"), PER MIL-S-5059 OR AMS 5513 (304), OR AMS 5524 (316), OR ASTM A240, OR ASME SA240
REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.4 lbs

APPROVED

DESIGN	SAD	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SAD		
CHECKED	NO	DRAWING NO.	REV. B
MFG. APPR.	JFS	D5489	SHEET 2 OF 7
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	18.06.14	COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

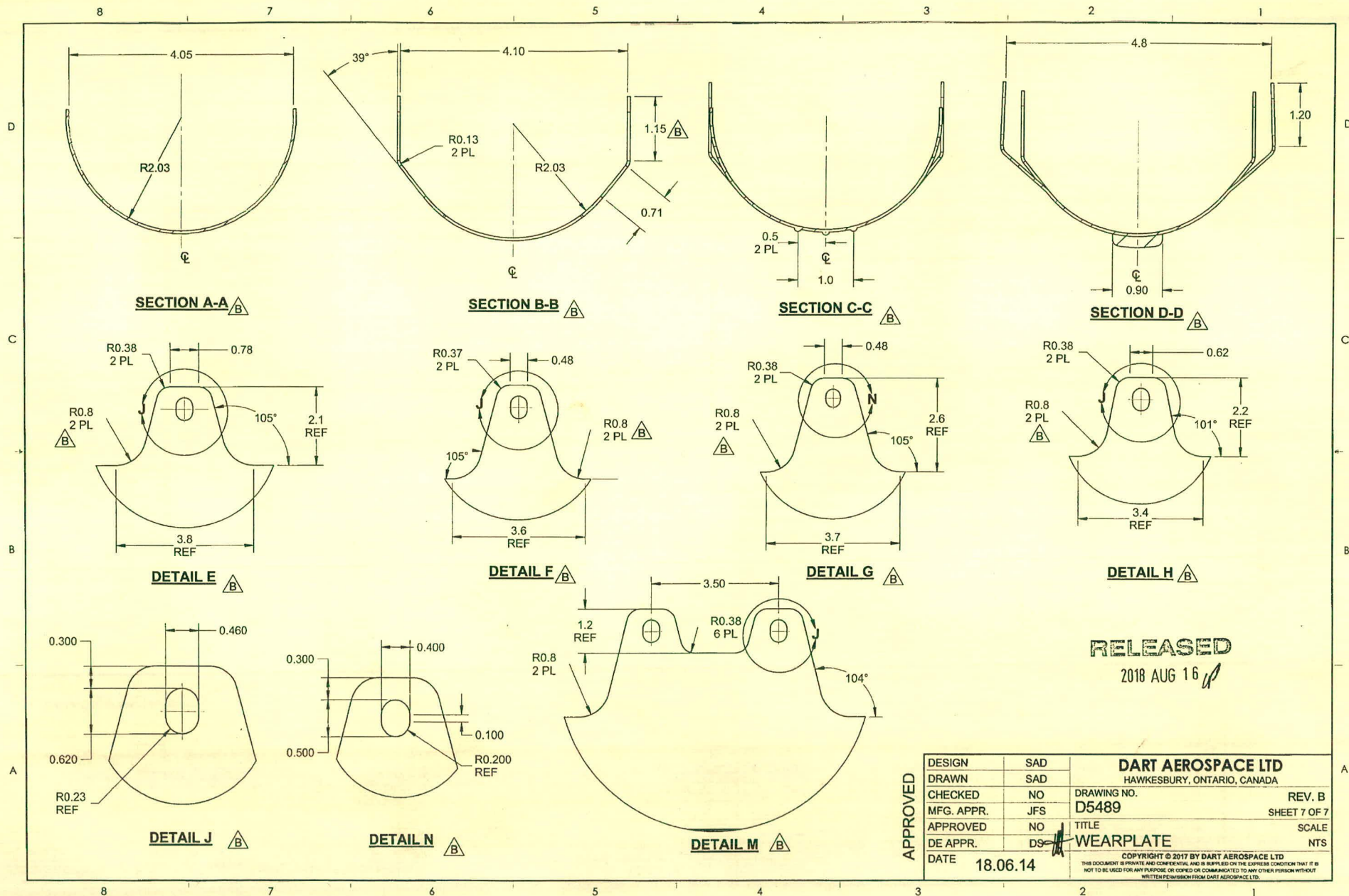


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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